

# LOW-VOLTAGE BANDGAP REFERENCE

## Abstract

Voltage dividing resistors (R1a, R1b, R2a, R2b) are connected in parallel with diode connected bipolar transistors (Q1, Q2) for splitting the voltage to the inputs of an operational amplifier (62, 82). Current is provided to this arrangement by current sources (I1, I2). When the supply voltage is about 0.85 volts, a temperature insensitive reference voltage of about 200 millivolts is available at the drain of a second transistor (M2, M2).